

CLIPPEDIMAGE= JP404049826A
PAT-NO: JP404049826A
DOCUMENT-IDENTIFIER: JP 04049826 A
TITLE: SMALL-SIZED MOTOR

PUBN-DATE: February 19, 1992

INVENTOR-INFORMATION:

NAME
SHIBA, NOBUO

ASSIGNEE-INFORMATION:

NAME
ASMO CO LTD

COUNTRY
N/A

APPL-NO: JP02158545
APPL-DATE: June 19, 1990

INT-CL_(IPC): H02K003/50; H02K037/04
US-CL-CURRENT: 310/254

ABSTRACT:

PURPOSE: To miniaturize the rotor shaft direction by integrally forming an engaging section housing a block body for a terminal to one of insulators at a position inner than an end face in the axial direction of the insulators at the position of a side section in the rotor shaft direction while engaging the block body for the terminal with the engaging section.

CONSTITUTION: A stator core 7 is formed, and insulators 8a, 8b are fitted from both sides and insulated, thus forming a stator coil 9. The insulators 8a, 8b shape a pectinate engaging section fitted to teeth and slots formed inside the stator core 7, and the pectinate engaging section has an outer ring-shaped section 83a and inner ring-shaped sections 84a on one end side. An engaging section 85 is formed outside the outer ring-shaped section 83a of the insulator 8a, and a block body 11 for terminals and the terminals 10 are inserted. Extensions 9a from each winding end section are disposed among the outer ring-shaped section and the inner ring-shaped sections, and connected to the end sections of the terminals 10. The winding 9, the extensions 9a, connector sections and a housing are molded integrally with a resin and constituted.

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DERWENT-ACC-NO: 1981-D1793D
DERWENT-WEEK: 198115
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TITLE: Speed and phase control for sync. motor - responds to sudden counter-torque by increasing supply power

INVENTOR: HOFFMANN, H; RADUCANU, D C

PATENT-ASSIGNEE: BRAUN AG[BRAG]

PRIORITY-DATA: 1979DE-2937838 (September 19, 1979)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DE 2937838 A	April 2, 1981	N/A	000	N/A
BR 8005314 A	May 19, 1981	N/A	000	N/A
DE 2937838 C	August 28, 1986	N/A	000	N/A
EP 27856 A	May 6, 1981	G	000	N/A
EP 27856 B	October 3, 1984	G	000	N/A
US 4418307 A	November 29, 1983	N/A	000	N/A

DESIGNATED-STATES: CH FR GB LI CH FR GB LI

CITED-DOCUMENTS: CH 459334; DE 1588329 ; DE 2125224 ; DE 2504478 ; DE 2550153 ; US 3855781

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
DE 2937838A	N/A	1979DE-2937838	September 19, 1979
EP 27856A	N/A	1980EP-0104425	July 28, 1980

INT-CL_(IPC): G04C003/00; G05F001/00 ; H02K019/02 ; H02P005/40

ABSTRACTED-PUB-NO: DE 2937838A

BASIC-ABSTRACT: The control is intended for motors in timepieces and esp. for wrist-watches subject to impacts causing sudden counter-torque on the motor. An inductive detecting coil is used to detect rotor pole movement with respect to the stator. The detecting coil's outputs are converted into rectangular pulses which are compared with reference pulses in terms of width and phase position. The reference pulses have constant width and frequency and are produced by a reference pulse generator.

Drive pulses are produced in synchronism with the detecting coil's pulses. The drive pulses have widths proportional to phase shift. The phase position w.r.t. the rotor poles is chosen so that when a pole is in advance a braking moment is produced but when in retard an accelerating moment is produced.

ABSTRACTED-PUB-NO: DE 2937838C

EQUIVALENT-ABSTRACTS: The motor has a rotor (2) with at least one pair of poles, a stator (3) with a field winding (4) acted upon with driving pulses and a pulse generator (27) which produces pulses of constant frequency and width. The pole movement compared to the stator is detected by an inductive sensor winding (5), the sensor signals are converted into corresp. essentially square pulses and are compared with constant pulses in a comparator (14) according to phase position. The result of the comparison, corresp. driving pulses are transmitted in the field winding.

The constant pulses are additionally compared to the sensor pulses with regard to their width, and the width of the working pulse is proportional to the phase shift between the constant and sensor pulses. Their phase position compared to the rotor field is so selected, that with a lead of the rotor field a brake pulse is produced and a lag of the rotor field produces an acceleration pulse, and these pulses are synchronised with the sensor pulses.

USE/ADVANTAGE - Time keeping unit such as watch and clock. Eliminates pole bounce, and without practically idle time ensures close matching of power requirement to external loading. (6pp)

EP 27856B

The circuit controls the speed and phase of a sync. motor and has a sensor coil (5) to produce pulses proportional to the rotor's speed. The coil is by a

pulse shaper (11-14). A phase comparator performs given tasks depending on whether reference generator pulses are advanced or retarded and by how much w.r.t. the sensor pulses.

The phase comparator comprises two D-flip flops and eliminates single pole jumps. The flip flops are coupled to logic in a specified way.

USE/ADVANTAGE - For sync. motors in analog clocks. Circuit by matt is fast and has no noticeable dead time, low power consumption, few components.
(10pp)e

TITLE-TERMS:

SPEED PHASE CONTROL SYNCHRONOUS MOTOR RESPOND SUDDEN COUNTER TORQUE INCREASE
SUPPLY POWER

DERWENT-CLASS: S04 V06 X13

EPI-CODES: S04-B01; V06-M01; X13-F03B;